

1. An oil suspension of silica powder comprising: silica powder; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant.
2. The oil suspension of claim 1 wherein said silica powder is selected from the group consisting of crystalline silica and amorphous silica.
3. The oil suspension of claim 1 wherein said silica powder is crystalline silica having a particle size in the general range of from about 15 microns to about 350 microns.
4. The oil suspension of claim 3 wherein said crystalline silica is present in said suspension in an amount in the range of from about 45% to about 52% by weight of said suspension.
5. The oil suspension of claim 1 wherein said silica powder is amorphous silica having a particle size in the general range of from about 5 microns to about 25 microns.
6. The oil suspension of claim 5 wherein said amorphous silica is present in said suspension in an amount in the range of from about 43% to about 47% by weight of said suspension.
7. The oil suspension of claim 1 wherein said mineral oil has a viscosity at 100°F in the range of from about 60 saybolt seconds to about 100 saybolt seconds and is present in said oil suspension in an amount in the range of from about 40% to about 55% by weight of said suspension.

8. The oil suspension of claim 1 wherein said oleophilic clay is present in said suspension in an amount in the range of from about 0.75% to about 5.5% by weight of said suspension.
9. The oil suspension of claim 1 where said oleophilic surfactant is selected from the group consisting of sorbitantriolate, sorbitantrilaurate, sorbitantripalmitate, sorbitantristearate and sorbitantrisesquioleate.
10. The oil suspension of claim 1 wherein said oleophilic surfactant is sorbitantriolate.
11. The oil suspension of claim 1 wherein said oleophilic surfactant is present in said suspension in an amount in the range of from about 0.1% to about 0.2% by weight of said suspension.
12. The oil suspension of claim 1 wherein said hydrophilic surfactant is selected from the group consisting of polyethoxylated sorbitantriolate, polyethoxylated sorbitantrilaurate, polyethoxylated sorbitantripalmitate, polyethoxylated sorbitantristearate and polyethoxylated sorbitantrisesquioleate.
13. The oil suspension of claim 1 wherein said hydrophilic surfactant is polyethoxylated sorbitantriolate.
14. The oil suspension of claim 1 wherein said hydrophilic surfactant is present in said suspension in an amount in the range of from about 2.5% to about 3.5% by weight of said suspension.

15. An oil suspension of coarse crystalline silica having a particle size in the range of from about 175 microns to about 350 microns comprising: coarse crystalline silica present in an amount of about 50% by weight of said oil suspension; mineral oil having a viscosity at 100°F of 70 saybolt seconds present in an amount of about 42.9% by weight of said oil suspension; oleophilic clay present in an amount of about 4% by weight of said oil suspension; a sorbitantrioleate oleophilic surfactant present in an amount of about 0.1% by weight of said oil suspension; and a polyethoxylated sorbitantrioleate hydrophilic surfactant present in an amount of about 3.0% by weight of said oil suspension.

16. An oil suspension of fine crystalline silica having a particle size in the range of from about 16 microns to about 20 microns comprising: fine crystalline silica present in an amount of about 50% by weight of said oil suspension; mineral oil having a viscosity at 100°F of 70 saybolt seconds present in an amount of about 43.9% by weight of said oil suspension; oleophilic clay present in an amount of about 3% by weight of said oil suspension; a sorbitantrioleate oleophilic surfactant present in an amount of about 0.1% by weight of said oil suspension; and a polyethoxylated sorbitantrioleate hydrophilic surfactant present in an amount of about 3.0% by weight of said oil suspension.

17. An oil suspension of amorphous silica having a particle size in the range of from about 5 to about 20 microns comprising: amorphous silica present in an amount of about 45% by weight of said oil suspension; mineral oil having a viscosity at 100°F of 70 saybolt seconds present in an amount of about 50.9% by weight of said oil suspension; oleophilic clay present in an amount of about 1.0% by weight of said oil suspension; a sorbitantrioleate oleophilic surfactant present in an amount of about 0.1% by weight of

said oil suspension; and a polyethoxylated sorbitantriolate hydrophilic surfactant present in an amount of about 3.0% by weight of said oil suspension.

18. A cement composition comprising:

a hydraulic cement;

water present in an amount sufficient to form a slurry; and

an oil suspension of silica powder that comprises silica powder, mineral oil, an oleophilic clay, an oleophilic surfactant and a hydrophilic surfactant.

19. The cement composition of claim 18 wherein said hydraulic cement is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.

20. The cement composition of claim 18 wherein said hydraulic cement is Portland cement.

21. The cement composition of claim 18 wherein said water is selected from the group consisting of fresh water and salt water.

22. The cement composition of claim 18 wherein said water is present in said cement composition in an amount in the range of from about 35% to about 65% by weight of hydraulic cement therein.

23. The cement composition of claim 18 wherein said oil suspension is present in said cement composition in an amount in the range of from about 10% to about 70% by weight of hydraulic cement therein.

24. The cement composition of claim 18 wherein said silica powder in said oil suspension is selected from the group consisting of crystalline silica and amorphous silica.

25. The cement composition of claim 18 wherein said silica powder in said oil suspension is crystalline silica powder having a particle size in the general range of from about 15 microns to about 350 microns.

26. The cement composition of claim 25 wherein said crystalline silica powder is present in said oil suspension in an amount in the range of from about 45% to about 52% by weight of said oil suspension.

27. The cement composition of claim 18 wherein said silica powder in said oil suspension is amorphous silica powder having a particle size in the general range of from about 5 microns to about 25 microns.

28. The cement composition of claim 27 wherein said amorphous silica powder is present in said oil suspension in an amount in the range of from about 43% to about 47% by weight of said oil suspension.

29. The cement composition of claim 18 wherein said mineral oil in said oil suspension has a viscosity of 100°F in the range of from about 60 saybolt seconds to about 100 saybolt seconds and is present in said oil suspension in an amount in the range of from about 40% to about 55% by weight of said oil suspension.

30. The cement composition of claim 18 wherein said oleophilic clay is present in said oil suspension in an amount in the range of from about 0.75% to about 5.5% by weight of said oil suspension.

31. The cement composition of claim 18 wherein said oleophilic surfactant in said oil suspension is selected from the group consisting of sorbitantrioleate, sorbitantrilaurate, sorbitantripalmitate, sorbitantristearate and sorbitantrisesquioleate.

32. The cement composition of claim 18 wherein said oleophilic surfactant in said oil suspension is sorbitantrioleate.

33. The cement composition of claim 18 wherein said oleophilic surfactant is present in said oil suspension in an amount in the range of from about 0.1% to about 0.2% by weight of said oil suspension.

34. The cement composition of claim 18 wherein said hydrophilic surfactant in said oil suspension is selected from the group consisting of polyethoxylated sorbitantrioleate, polyethoxylated sorbitantrilaurate, polyethoxylated sorbitantripalmitate, polyethoxylated sorbitantristearate and polyethoxylated sorbitantrisesquioleate.

35. The cement composition of claim 18 wherein said hydrophilic surfactant in said oil suspension is polyethoxylated sorbitantrioleate.

36. The cement composition of claim 18 wherein said hydrophilic surfactant is present in said oil suspension in an amount in the range of from about 2.5% to about 3.5% by weight of said oil suspension.

37. A method of cementing a subterranean zone comprising:

(a) preparing or providing a cement composition comprising a hydraulic cement, sufficient water to form a slurry and an oil suspension of silica powder that comprises silica powder, mineral oil, an oleophilic clay, an oleophilic surfactant and a hydrophilic surfactant;

(b) placing said cement composition in said subterranean zone; and

(c) allowing said cement composition to set therein.

38. The method of claim 37 wherein said hydraulic cement is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.

39. The method of claim 37 wherein said hydraulic cement is Portland cement.

40. The method of claim 37 wherein said water is selected from the group consisting of fresh water and salt water.

41. The method of claim 37 wherein said water is present in said cement composition in an amount in the range of from about 35% to about 65% by weight of hydraulic cement therein.

42. The method of claim 37 wherein said oil suspension is present in said cement composition in an amount in the range of from about 10% to about 70% by weight of hydraulic cement therein.

43. The method of claim 37 wherein said silica powder in said oil suspension is selected from the group consisting of crystalline silica and amorphous silica.

44. The method of claim 37 wherein said silica powder in said oil suspension is crystalline silica powder having a particle size in the general range of from about 15 microns to about 350 microns.

45. The method of claim 44 wherein said crystalline silica powder is present in said oil suspension in an amount in the range of from about 45% to about 52% by weight of said oil suspension.

46. The method of claim 37 wherein silica powder in said oil suspension is amorphous silica powder having a particle size in the general range of from about 5 microns to about 25 microns.

47. The method of claim 46 wherein said amorphous silica powder is present in said oil suspension in an amount in the range of from about 43% to about 47% by weight of said oil suspension.

48. The method of claim 37 wherein said mineral oil in said oil suspension has a viscosity of 100°F in the range of from about 60 saybolt seconds to about 100 saybolt seconds and is present in said oil suspension in an amount in the range of from about 40% to about 55% by weight of said oil suspension.

49. The method of claim 37 wherein said oleophilic clay is present in said oil suspension in an amount in the range of from about 0.75 to about 5.5% by weight of said oil suspension.



50. The method of claim 37 wherein said oleophilic surfactant in said oil suspension is selected from the group consisting of sorbitantrioleate, sorbitantrilaurate, sorbitantripalmitate, sorbitantristearate and sorbitantrisesquioleate.
51. The method of claim 37 wherein said oleophilic surfactant in said oil suspension is sorbitantrioleate.
52. The method of claim 37 wherein said oleophilic surfactant is present in said oil suspension in an amount in the range of from about 0.1% to about 0.2% by weight of said oil suspension.
53. The method of claim 37 wherein said hydrophilic surfactant in said oil suspension is selected from the group consisting of polyethoxylated sorbitantrioleate, polyethoxylated sorbitantrilaurate, polyethoxylated sorbitantripalmitate, polyethoxylated sorbitantristearate and polyethoxylated sorbitantrisesquioleate.
54. The method of claim 37 wherein said hydrophilic surfactant in said oil suspension is polyethoxylated sorbitantrioleate.
55. The method of claim 37 wherein said hydrophilic surfactant is present in said oil suspension in an amount in the range of from about 2.5% to about 3.5% by weight of said oil suspension.
56. An oil suspension comprising a powder having a particle size in the range of from about 5 microns to about 350 microns; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant.

57. The oil suspension of claim 56 wherein said powder is selected from the group consisting of micro-silica, silica flour, fine silica flour, silica sand, fine particle size cement, ultra-fine particle size cement, fly ash, slag, vitrified shale and zeolite.

58. The oil suspension of claim 56 wherein said powder is present in said suspension in an amount in the range of from about 43% to about 52% by weight of said suspension.

59. An oil suspension comprising a powder selected from the group consisting of micro-silica, silica flour, fine silica flour, silica sand, fine particle size cement, ultra-fine particle size cement, fly ash, slag, vitrified shale and zeolite; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant.

60. The oil suspension of claim 59 wherein said powder is present in said suspension in an amount in the range of from about 43% to about 52% by weight of said suspension.

61. An oil suspension of comprising a powder present in said suspension in an amount in the range of from about 43% to about 52% by weight of said suspension and having a particle size in the range of from about 5 microns to about 350 microns wherein said powder is selected from the group consisting of micro-silica, silica flour, fine silica flour, silica sand, fine particle size cement, ultra-fine particle size cement, fly ash, slag, vitrified shale and zeolite; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant.

62. A cement composition comprising:

a hydraulic cement;

water present in an amount sufficient to form a slurry; and

an oil suspension comprising a powder having a particle size in the range of from about 5 microns to about 350 microns; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant.

63. The cement composition of claim 62 wherein said powder is selected from the group consisting of micro-silica, silica flour, fine silica flour, silica sand, fine particle size cement, ultra-fine particle size cement, fly ash, slag, vitrified shale and zeolite.

64. The cement composition of claim 62 wherein said powder is present in said suspension in an amount in the range of from about 43% to about 52% by weight of said suspension.

65. The cement composition of claim 62 wherein said hydraulic cement is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.

66. The cement composition of claim 62 wherein said hydraulic cement is Portland cement.

67. The cement composition of claim 62 wherein said water is selected from the group consisting of fresh water and salt water.

68. The cement composition of claim 62 wherein said water is present in said cement composition in an amount in the range of from about 35% to about 65% by weight of hydraulic cement therein.

69. The cement composition of claim 62 wherein said oil suspension is present in said cement composition in an amount in the range of from about 10% to about 70% by weight of hydraulic cement therein.

70. A cement composition comprising:

a hydraulic cement;

water present in an amount sufficient to form a slurry; and

an oil suspension comprising a powder selected from the group consisting of micro-silica, silica flour, fine silica flour, silica sand, fine particle size cement, ultra-fine particle size cement, fly ash, slag, vitrified shale and zeolite; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant.

71. The cement composition of claim 70 wherein said powder is present in said suspension in an amount in the range of from about 43% to about 52% by weight of said suspension.

72. The cement composition of claim 70 wherein said hydraulic cement is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.

73. The cement composition of claim 70 wherein said hydraulic cement is Portland cement.

74. The cement composition of claim 70 wherein said water is selected from the group consisting of fresh water and salt water.

75. The cement composition of claim 70 wherein said water is present in said cement composition in an amount in the range of from about 35% to about 65% by weight of hydraulic cement therein.

76. The cement composition of claim 70 wherein said oil suspension is present in said cement composition in an amount in the range of from about 10% to about 70% by weight of hydraulic cement therein.

77. A method of cementing a subterranean zone comprising:

(a) preparing or providing a cement composition comprising a hydraulic cement, sufficient water to form a slurry and an oil suspension comprising a powder having a particle size in the range of from about 5 microns to about 350 microns; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant;

(b) placing said cement composition in said subterranean zone; and

(c) allowing said cement composition to set therein.

78. The method of claim 77 wherein said powder is selected from the group consisting of micro-silica, silica flour, fine silica flour, silica sand, fine particle size cement, ultra-fine particle size cement, fly ash, slag, vitrified shale and zeolite.

79. The method of claim 77 wherein said powder is present in said suspension in an amount in the range of from about 43% to about 52% by weight of said suspension.

80. The method of claim 77 wherein said hydraulic cement is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.

81. The method of claim 77 wherein said hydraulic cement is Portland cement.

82. The method of claim 77 wherein said water is selected from the group consisting of fresh water and salt water.

83. The method of claim 77 wherein said water is present in said cement composition in an amount in the range of from about 35% to about 65% by weight of hydraulic cement therein.

84. The method of claim 77 wherein said oil suspension is present in said cement composition in an amount in the range of from about 10% to about 70% by weight of hydraulic cement therein.

85. A method of cementing a subterranean zone comprising:

(a) preparing or providing a cement composition comprising a hydraulic cement, sufficient water to form a slurry and an oil suspension comprising a powder selected from the group consisting of micro-silica, silica flour, fine silica flour, silica sand, fine particle size cement, ultra-fine particle size cement, fly ash, slag, vitrified shale and zeolite; mineral oil; an oleophilic clay; an oleophilic surfactant; and a hydrophilic surfactant;

(b) placing said cement composition in said subterranean zone; and

(c) allowing said cement composition to set therein.

86. The method of claim 85 wherein said powder is present in said suspension in an amount in the range of from about 43% to about 52% by weight of said suspension.

87. The method of claim 85 wherein said hydraulic cement is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.

88. The method of claim 85 wherein said hydraulic cement is Portland cement.

89. The method of claim 85 wherein said water is selected from the group consisting of fresh water and salt water.

90. The method of claim 85 wherein said water is present in said cement composition in an amount in the range of from about 35% to about 65% by weight of hydraulic cement therein.

91. The method of claim 85 wherein said oil suspension is present in said cement composition in an amount in the range of from about 10% to about 70% by weight of hydraulic cement therein.